



# ***ONR S&T for Naval Manpower, Personnel, Training, and Human Systems Integration Technologies***

Navy Workforce Research and Analysis  
Conference

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***"At the top of the list of things I want to see cemented is Sea Warrior and all the pieces that go into that. This is truly a revolution, and I'm going to be working that full time for the next year."***

09/11/16

--ADM Vern Clark, August 2

2003



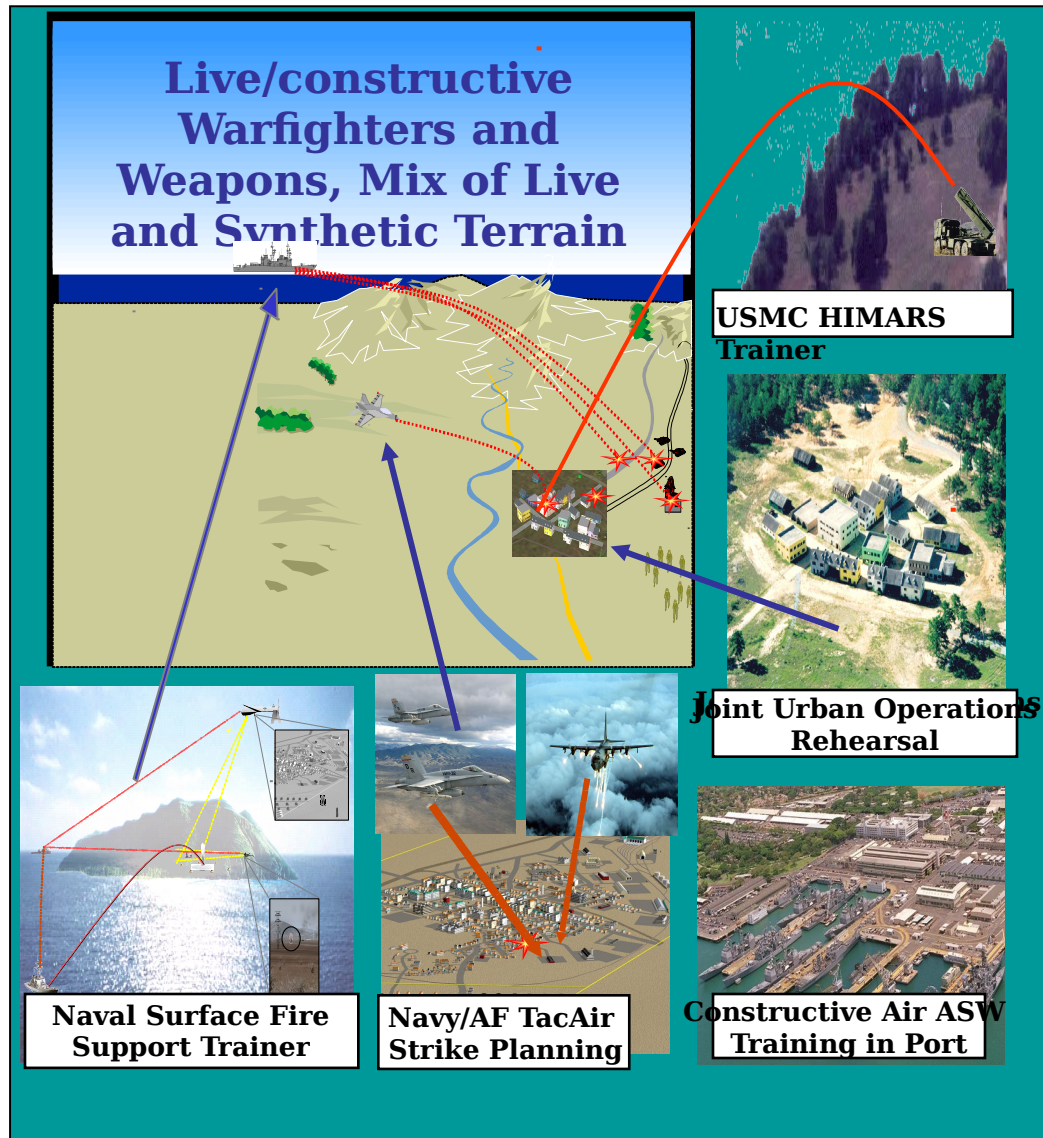
# ***Supports Fleet Commands - from Engineering Total Ship Conference***

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- **VADM La Fleur (Commander, Naval Surface Forces)**
  - **Conning Officer Virtual Environment - Training of OODs**
  - **Not Bombing Puerto Rico - Virtual At Sea Training**
- **Composable FORCENet**
  - **Interactive Multisensor Advanced Trainer - Training & Decision Support**
  - **Knowledge Wall/Web - Deployed on USS Carl Vinson (CVN - 70)**
- **HSI for Tactical Tomahawk Weapons Control**
- **Sea Warrior 21 - Integrated Capable Manpower**
- **N1 Program**



# Virtual At Sea Training (VAST)



## The VAST Advantage

- Meets broad spectrum of training needs
- Maintains readiness across entire IDTC
- Increases affordability of training 50%

## VAST Technology

Family of trainers exploiting advances in M&S to allow combat units use of live or constructive fire against simulated targets in synthetic terrain for realistic, deployable training any time/ place

## VAST Products Delivered

NSFS VAST components deployed in FY 03  
(qualified 6+ ships to date)

## VAST Products under Development

(prototypes by **FY07** or before, contingent on continuing \$)  
ASW AirVAST; Strike AirVAST, USW VAST, USMC VAST, JOUST-VAST



# Capable Manpower - Major Themes

- New Human Systems Integration Technologies
- Attrition Reduction & Career Management Technologies
- Performance Measures and Metrics
- Scientifically-based Distributed Learning Principles and Guidelines
- New Modeling and Visualization Technologies
- Virtual Training and Mission Rehearsal Environments





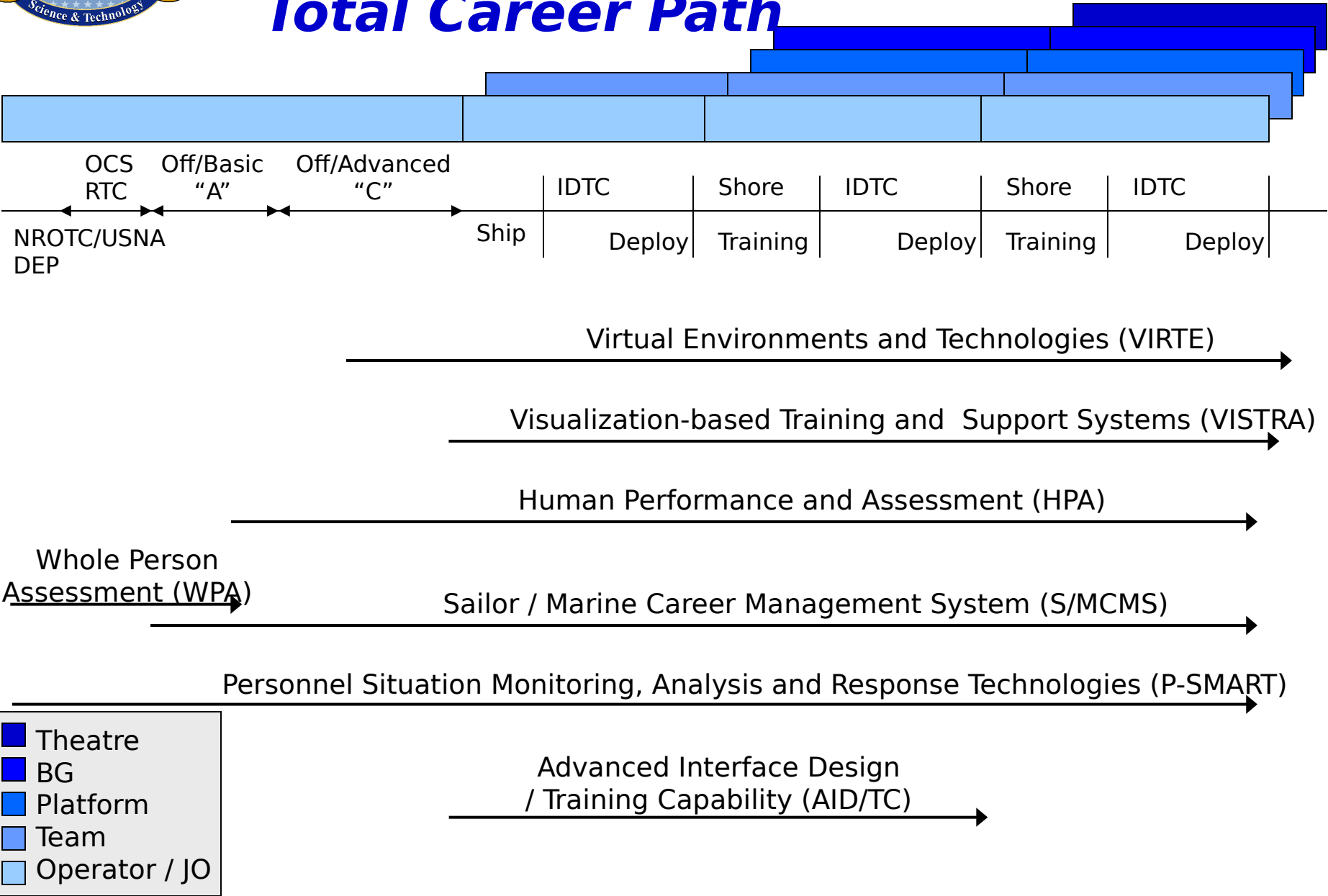
# ***Capable Manpower Enabling Capabilities***

- **HUMAN FACTORS/HSI (4.3%)\*** Design systems for warfighter performance enhancement, manpower workload reduction, and minimal training impact to accommodate the evolving Naval environment of optimized manning initiatives and increasing system complexity
  - 3 Products
- **MANPOWER AND PERSONNEL (25.5%)\*** Recruit and retain Sailors and Marines for the right billets at the right time - satisfying needs of Naval commands while providing challenging and personally rewarding career paths
  - 14 Products
- **TRAINING (70.2%)\*** Provide Sailors and Marines with the mission critical competencies essential to waging war and winning the Nation's battles through continuous training and education centered on the learning strengths of the individual at affordable cost
  - 12 Products

\*(% of total CM FNC  
Funding)

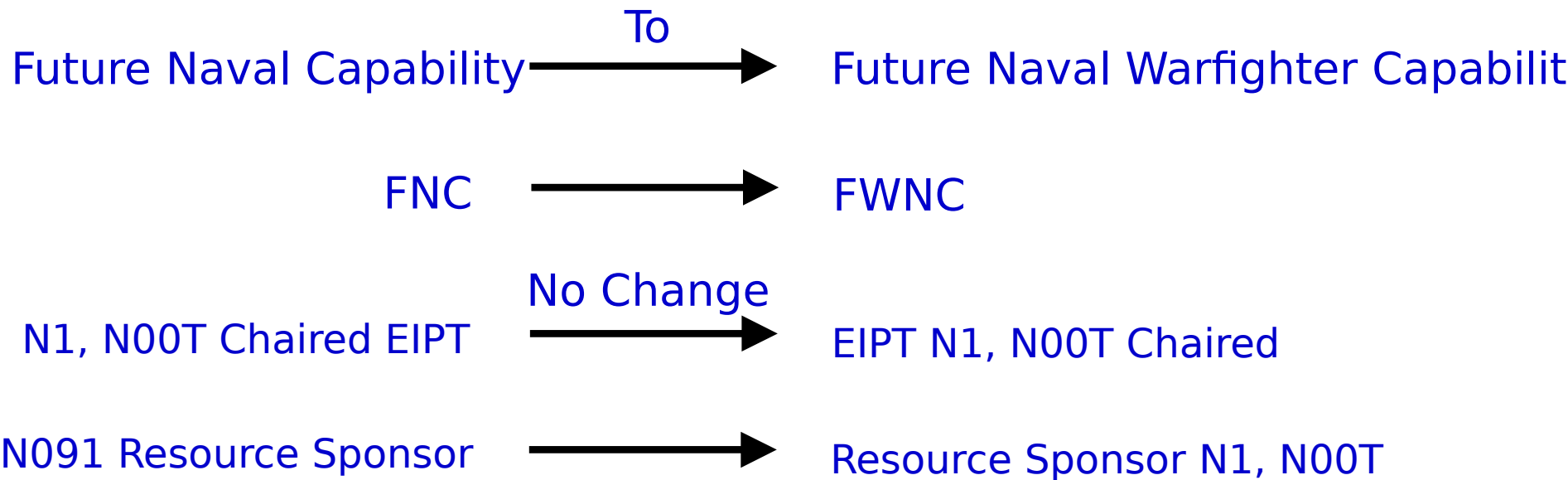


# Capable Manpower - Supports Total Career Path





# ***Capable Manpower - Management Dynamics***



***No Change to Technical  
Program***





# ***Whole Person Assessment (WPA)***

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- **Integrated set of tools for whole person assessment to significantly reduce early attrition, improve job satisfaction, while providing a monitoring and forecasting system for career intentions and factors that influence.**



# ***Sailor/Marine Career Management System (S/MCMS)***

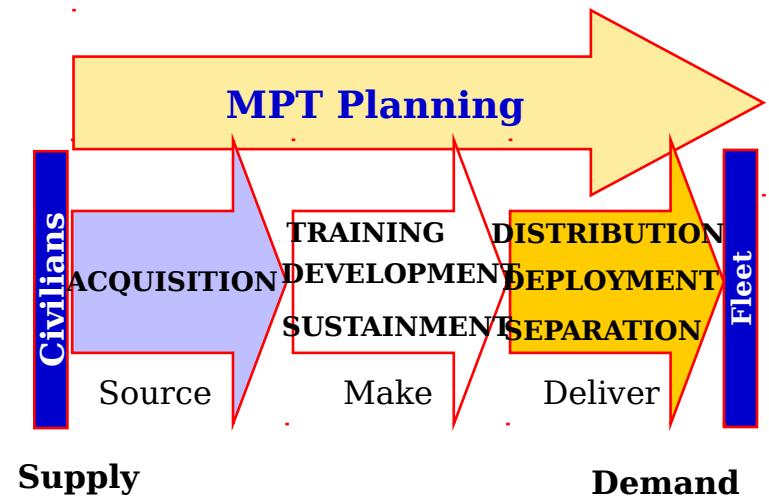
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- **Integrated human and automated decision support system to assist Navy, commands, and personnel with reenlistment, assignment, career change, and education decisions**



# ***Personnel Situation Monitoring, Analysis, and Response Technology (P-SMART)***

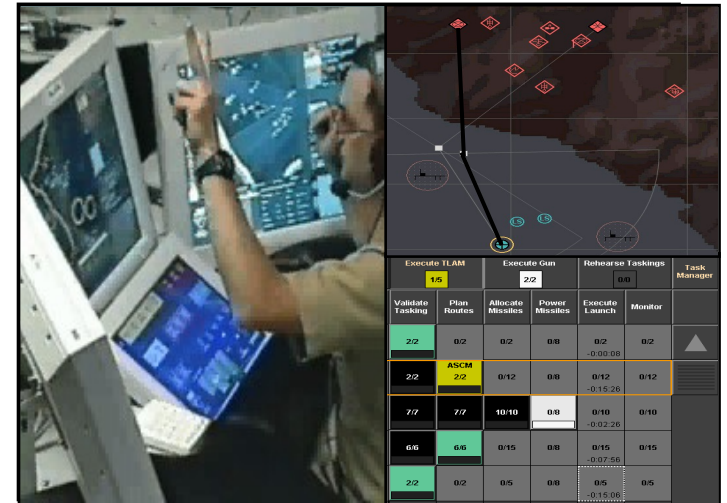
- Integration of the individual P-SMART products into a decision support tool that provides real-time status of current manpower conditions and statistically valid forecasts of future conditions under various policy scenarios**





# ***Advanced Interface Design/Training (AID/TC)***

- **Prototype Human-Systems Interface (HSI): Task-Managed interface for Tactical Tomahawk and an Integrated Land Attack Weapons Control Systems**
  - Supports both C2 & weapon control tasks
  - Provides supervisory control, workload allocation & team collaboration support
- **Software requirements & design models for a task-centered LAW user interface**





# Capable Manpower New Directions

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- **Funded and Planned FY 05 - FY 07**
- **Planning FY 08 - FY 10**
  - **Strengthen HSI/HSE component**
  - **Continue Manpower and Personnel with redirection**
  - **Continue Training ~ current level**